

Historical COMMANDER NAVAL AIR FORCES

Top Aeromedical Issues

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USNAC January 2015





NAVY MEDICINE OPERATIONAL TRAINING CENTER



NMOTC FACTS

CNO Designated Warfare Center of Excellence

- 63 Courses
- 60 Facilities
- 15 Locations
- 23,000+ Students
- 43,000+ Aeromedical Dispositions
- 250+ Repatriated POW Evaluations
- 100+ International Students
- Air Force, Marine and Army Staff

NAVY MEDICINE OPERATIONAL TRAINING CENTER, (NMOTC) PENSACOLA, FL

- R. E. Mitchell Center for Repatriated Prisoners of War
- Naval Aerospace Medical Institute (NAMI)
- Naval Survival Training Institute (NSTI)
- ASTC Pensacola



NAVY MEDICINE OPERATIONAL TRAINING CENTER



CAPT Kris Belland
Executive Officer
Navy Medicine Operational
Training Center



CAPT Paul Kane
Commanding Officer
Navy Medicine Operational
Training Center



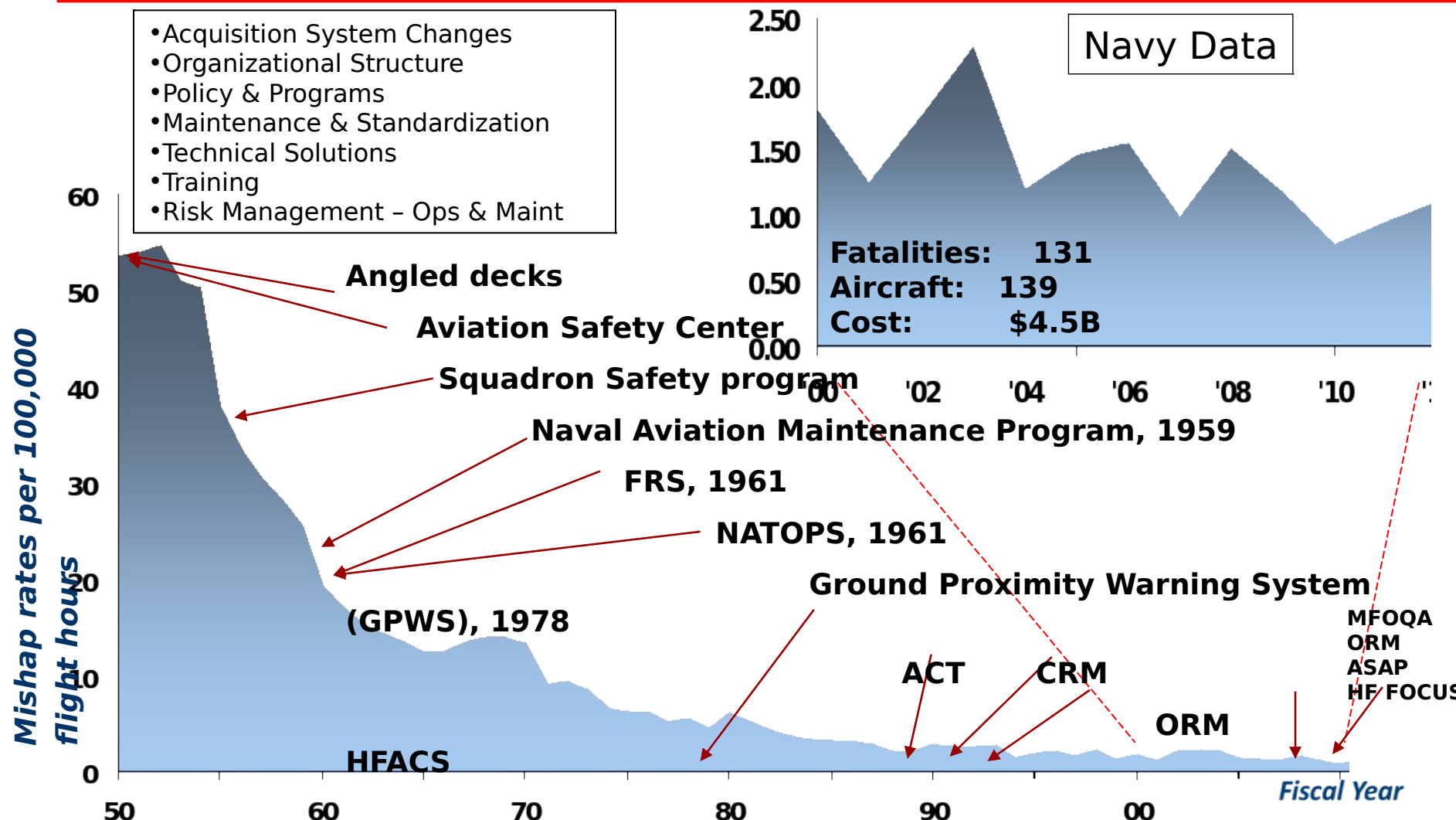
HMCM Omar Azmitia
Command Master Chief
Navy Medicine Operational
Training Center

Leadership Triad



Aviation Safety Historical Perspective

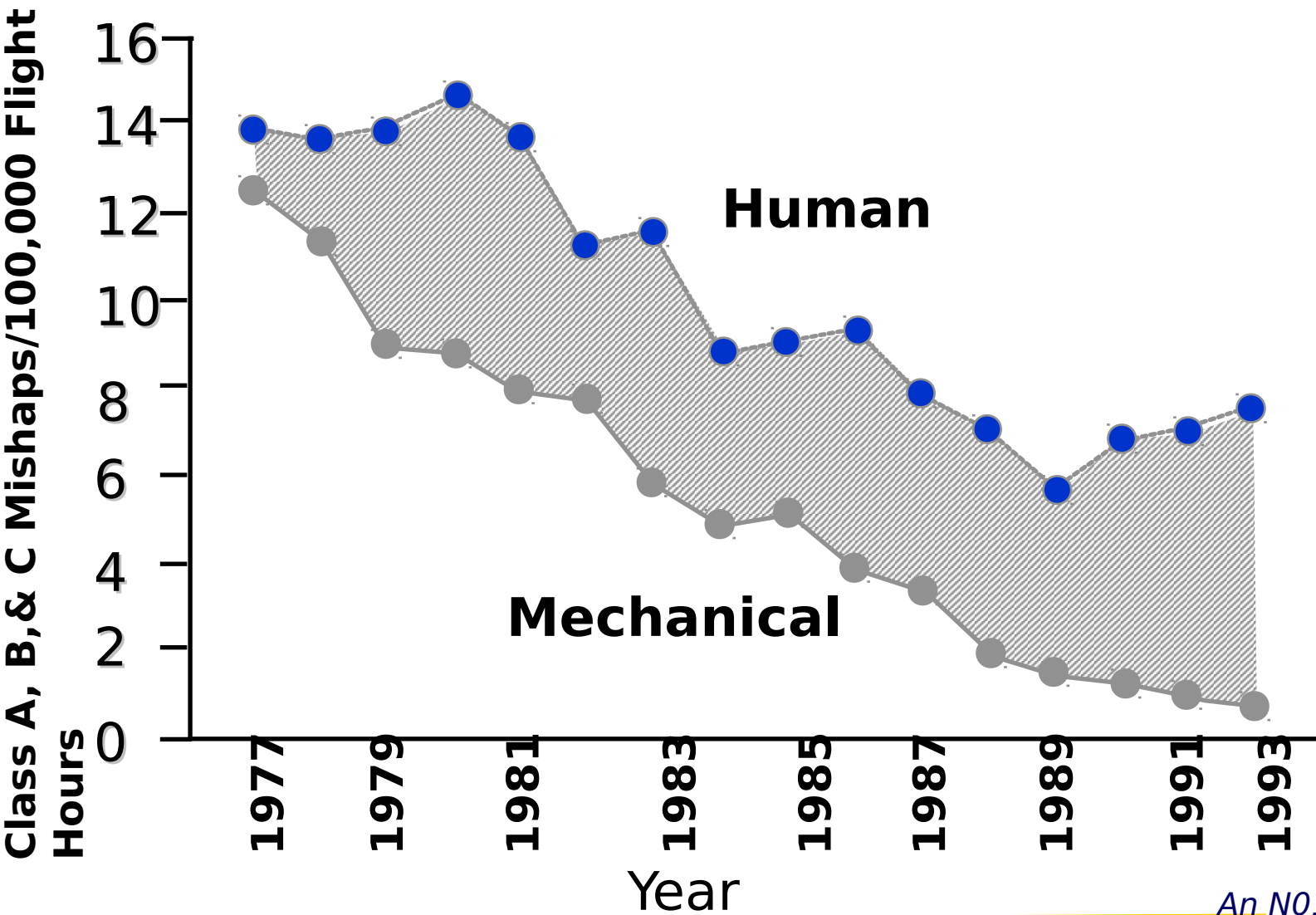
- Acquisition System Changes
- Organizational Structure
- Policy & Programs
- Maintenance & Standardization
- Technical Solutions
- Training
- Risk Management - Ops & Maint



Focus: Human Factors and Safety Information / Program Management



Navy / Marine Corps Mishaps FOUO CY 1977-93

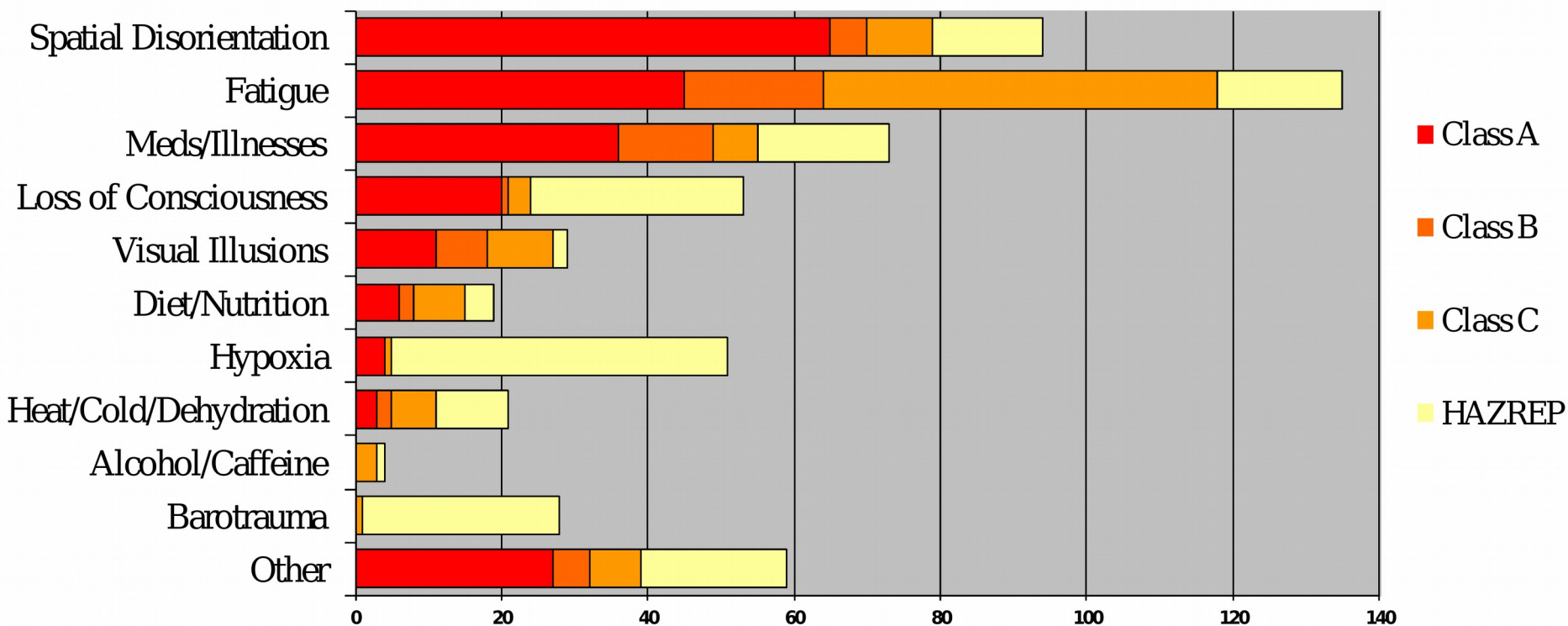




FOUO



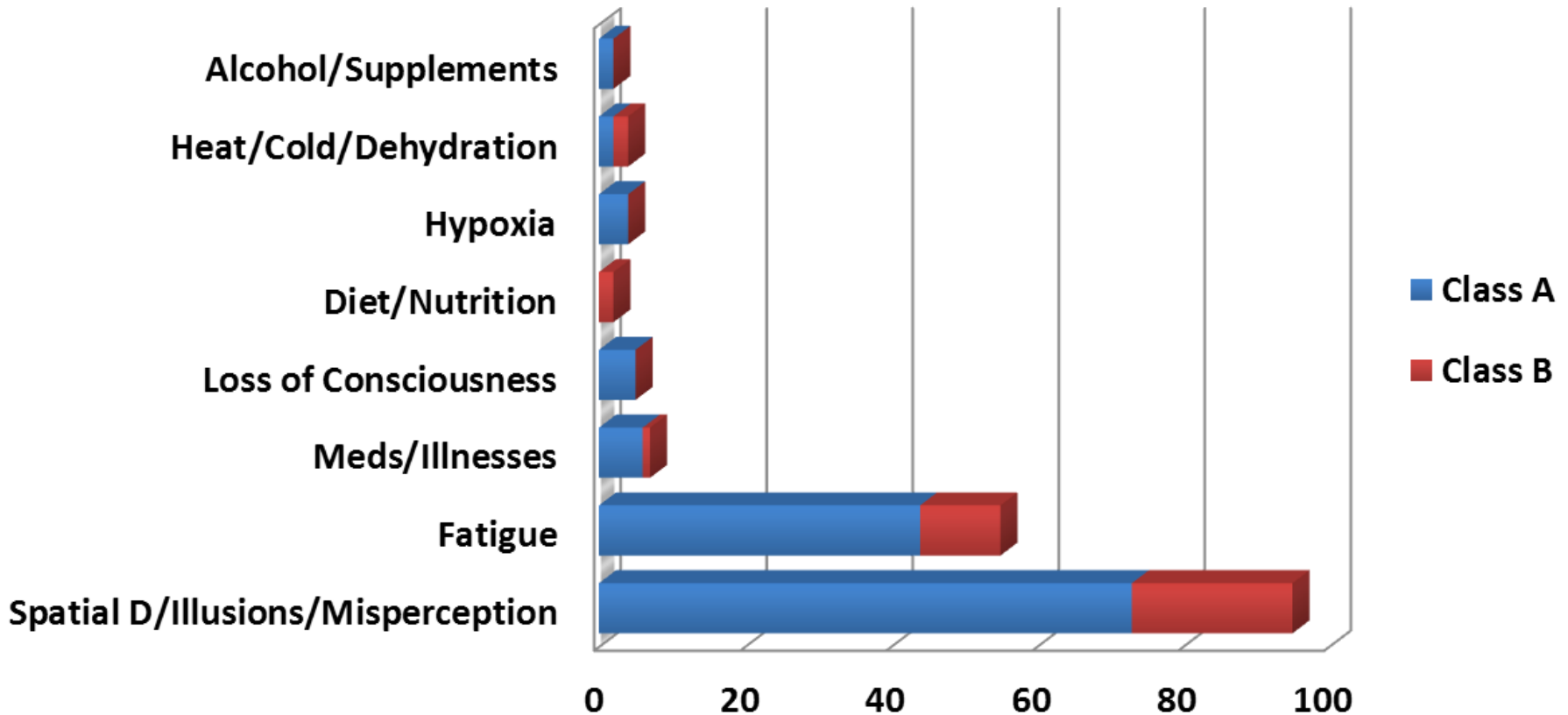
Aeromedical Causal Factors Reported in Mishaps & HAZREPs



Mishap Causal Factors



Aeromedical Causal Factors - FYs 1999-2013





Aviation Medicine

Priorities

CDR Rich Folga

17 Mar 2014



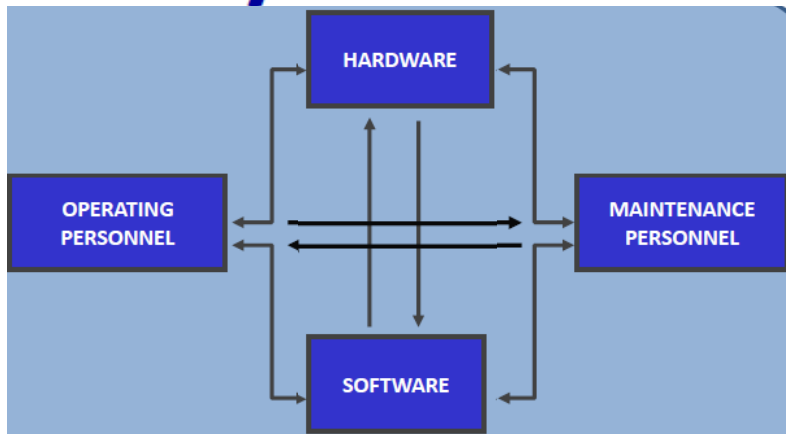
CNAF Top Priorities List: Aeromedical Human Performance and Human Systems Integration



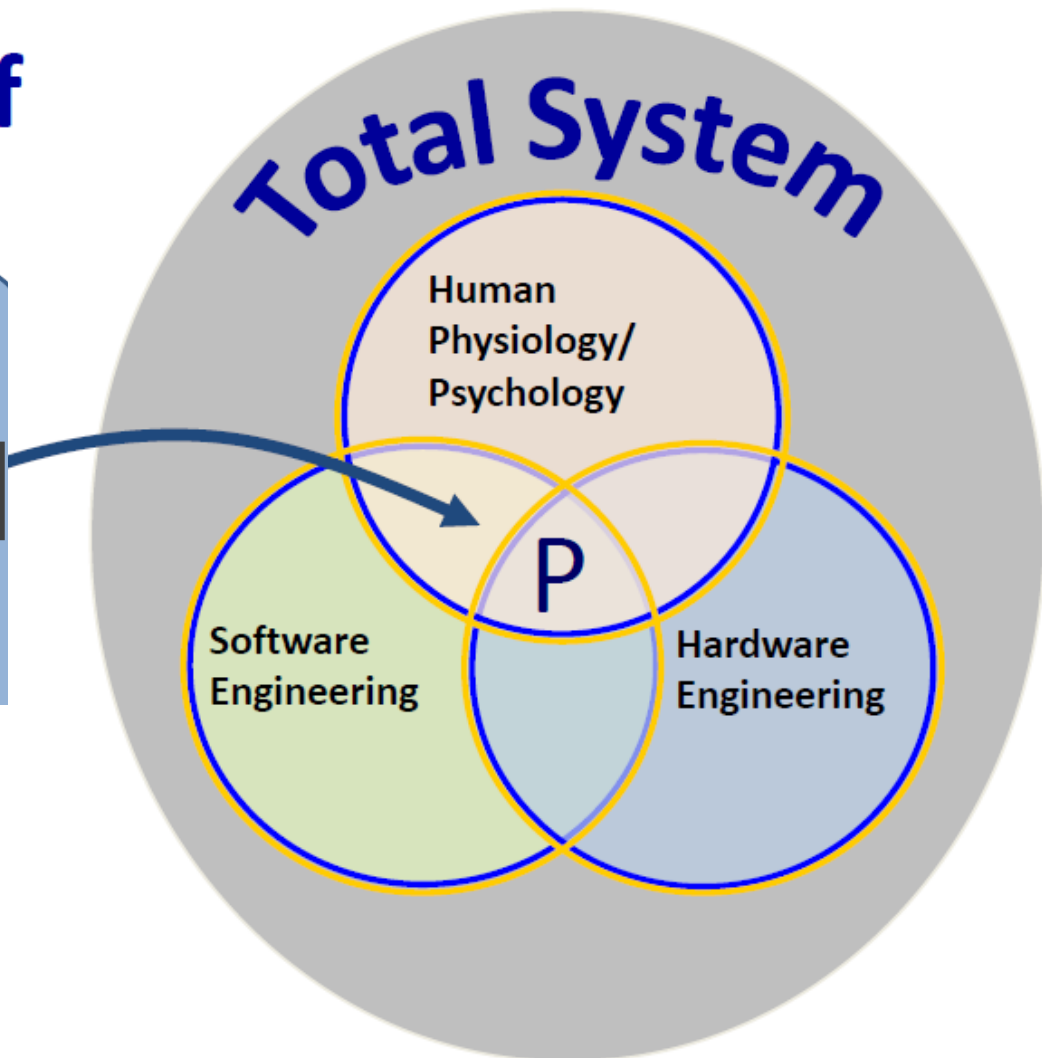
- 1. Spatial Disorientation and CFIT Mitigation (Folga)**
- 2. Fatigue Operations (Caldwell)**
- 3. Hypoxia and Decompression Sickness (Folga/Phillips)**
- 4. Vibration, Neck, Back Pain and Injury (Wells)**
- 5. G-Induced Loss of Consciousness prevention (Folga)**
- 6. Unmanned Aircraft Systems MPT&E (Foster/Arnold/Williams)**
- 7. Motion Sickness (Suggest Folga)**
- 8. Vision Enhancement and Protection (Suggest Reddix)**
 - a. Refractive Eye Surgery**
 - b. Directed Energy Weapons**
- 9. Hearing Protection and Performance (Hayes)**
- 10. EMALS / Magnetic Environment Exposure (Need champion)**

Basic Philosophy

People are Part of the System



System
performance

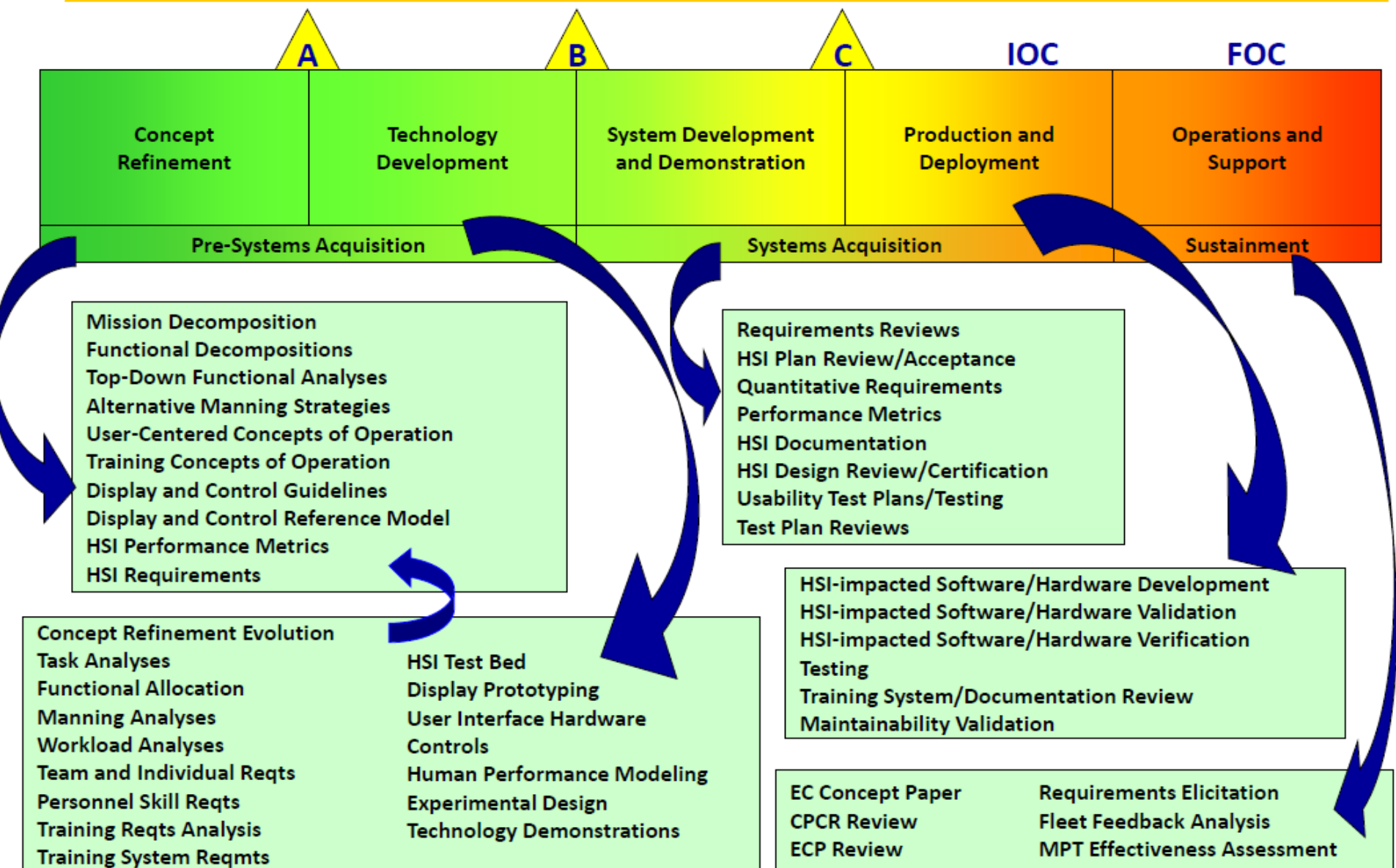




HSI DOMAINS (7 + 2)

- **Maintenance**
- **Human Factors Engineers (NAVAIR, AMDD, AP, AEP)**
- **Manpower (N1)**
- **Environmental Safety / Occupational Health (BUMED)**
- **Habitability (NAVAIR, AP)**
- **Survivability (NAVAIR, AP)**
- **Resources / Comptroller**
- **Research (NHRC, NAMRU, DoD)**
- **Requirements (N8)**

DoD 5000.02 and HSI Product Sets



Naval Expeditionary Health Service Support (NEHSS)



OPNAV N093/BUMED
10 November 2014

UNCLASS

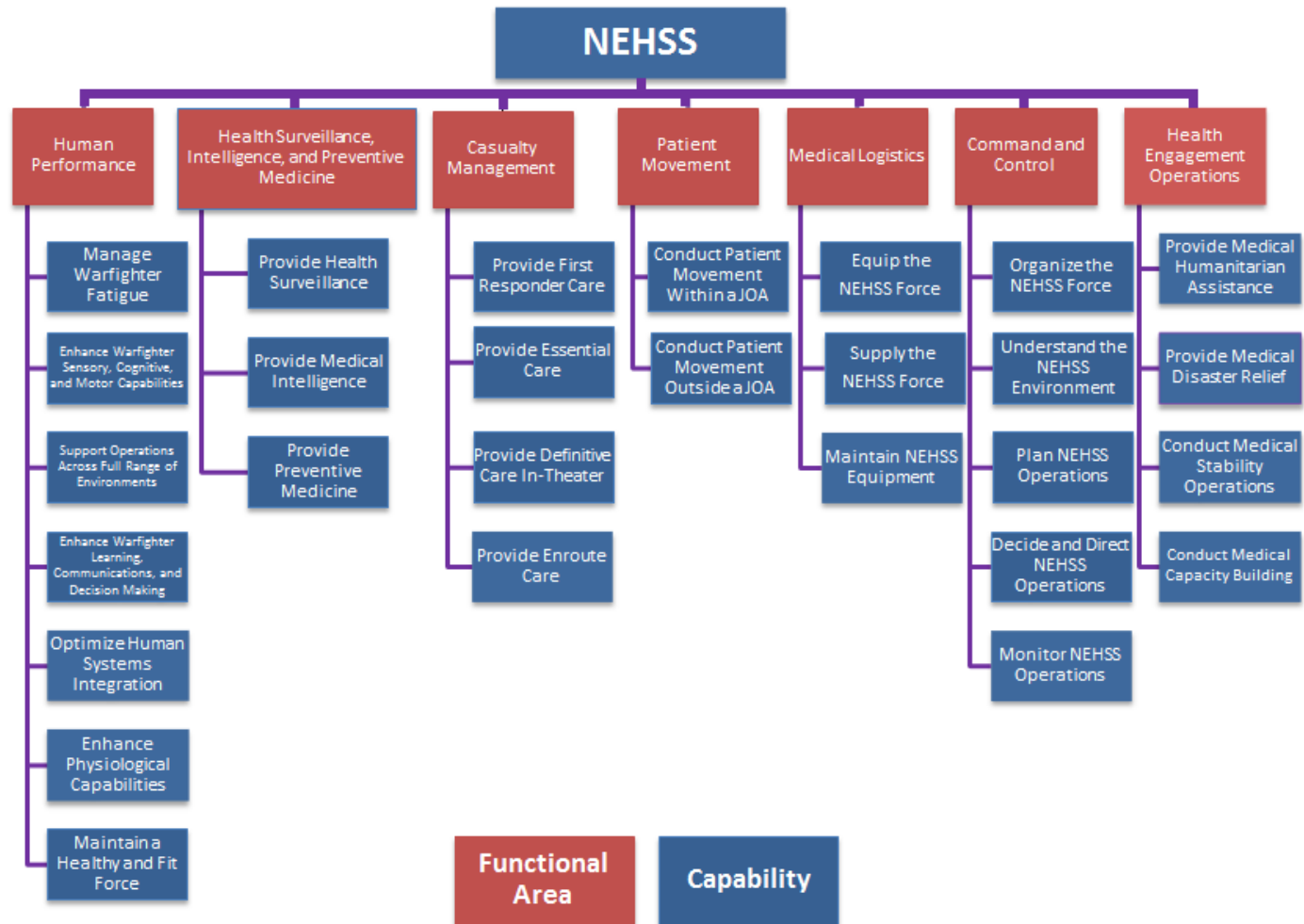


Capabilities Required

**Warfare
Integration**

**Balancing Capability, Capacity, and
Affordability**

- NEHSS has 7 functions supported by 28 capabilities



Human Performance enables other capabilities



Achieving NEHSS Wholeness

Potential DCR	Number of Gaps	Associated Gap IDs
DCR 1: NEHSS support to the Sea basing Concept	13	5,7,8,9,13,15,17,18,19,20,21,30,39
DCR 2: Establish NEHSS CD&I	3	28,36,70
DCR 3: Patient Movement in & from the Sea Base	6	12,13,16,17,71,72
DCR 4: C2 Support for NEHSS operations in & from the Sea Base	8	14,24,25,26,27,28,35,36
DCR 5: Training support for NEHSS ops in & from the Sea Base	15	1,2,3,4,10,11,22,29,40,42,43,44,46,47,48
DCR 6: IT Support for NEHSS operations in & from the Sea Base	11	29,31,34,37,41,45,46,47,65,66,68
DCR 7: NEHSS Global Health support in & from the Sea Base	9	22,33,37,38,40,41,42,43,44
DCR 8: Health Surveillance & Intel, Preventive Med in & from the Sea Base	4	45,46,47,48
DCR 9: Medical Logistics support for NEHSS ops in & from the Sea Base	14	6,23,31,32,61,62,63,64,65,66,67,68,69,70
DCR 10: NEHSS support for Warfighter Human Performance	12	49,50,51,52,53,54,55,56,57,58,59,60

DCR addresses 12 of 72 NEHSS capability gaps



Background

- **HP DCR: Ninth of 10 DCRs to achieve NEHSS wholeness**
 - CBA/ICD (approved Dec 2012): 72 gaps, 178 solution approaches
 - 12 HP-related gaps; 15 non-materiel solutions approaches to mitigate
 - DCRs assign action, accountability, schedule and resources
- **HP is approached differently according to warfare community**
 - Specwar: warrior is the weapon, physical performance and resilience required
 - USMC: warrior is the weapon, physical performance and resilience required
 - Aviation: man/machine interface is essential to mission success
 - Surface/sub: reliability and team integration is essential to mission success
- **NEHSS ICD directs an organization to coordinate Navy/Joint HP**
 - Integrate/Standardize Human Performance Practices: best practices
 - Improve warrior readiness for all tasks
 - Reduce casualties and injuries, decrease warfighter morbidity and mortality
 - Uniformly improve physical/mental strength, physio-/psycho-logical resilience



Applicable NEHSS Gaps

Gap #	Gap Statement	Gap Priority
49	Insufficient number of aerospace medicine specialists	66th
50	Insufficient number of flight surgeons to support requirement.	60th
51	Lack of shipboard pandemic and bio (Bio-attack, PI&ID - Pandemic Influenza and Infectious Disease) response to optimize continuity of operations.	50th
52	Insufficient personnel protective equipment from directed energy weapons.	41st
53	Lack of ability to provide medical support to submarine rescue operations.	38th
54	Insufficient HSI during system design and life cycle operation.	58th
55	Insufficient policy on Human Performance, Maintenance and Enhancement: boosting human performance beyond naturally occurring levels.	72nd
56	Inability to evaluate and forecast fatigue levels prior to operations.	64th
57	Doctrine and Policy do not adequately support providing primary care services to non-standard (contingency) deployed forces in the EHSS environment.	71st
58	Insufficient operational readiness screening.	44th
59	Inability to monitor cognitive function in operational environments.	67th
60	Insufficient ability to protect, mitigate, and treat the effects of blast and impact injuries in the maritime domain.	49th

Gap number is an administrative number that represents each of 72 gaps

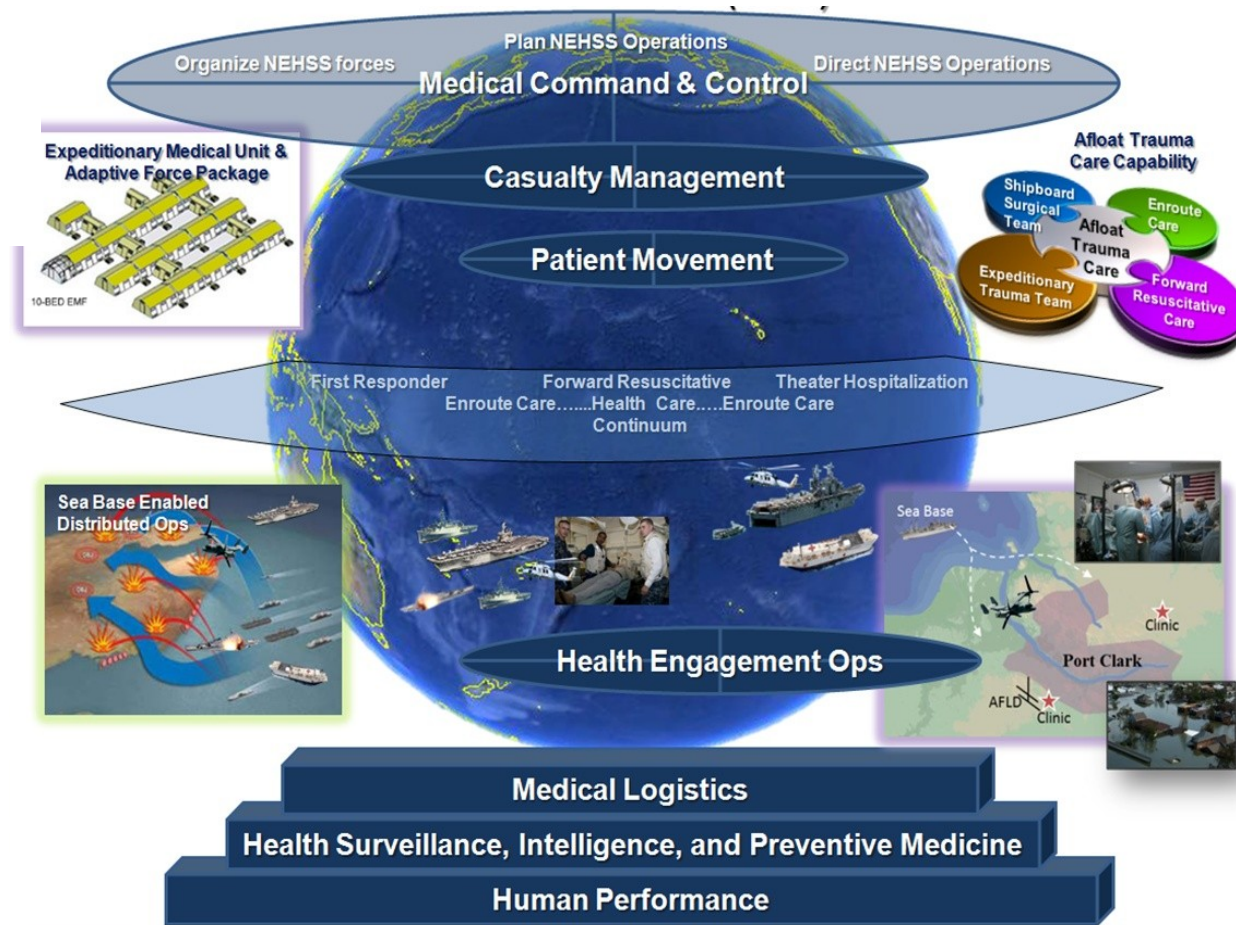
Gap priority is based on aggregate risk and importance to improve



Purpose

- **Casualty Management provides *reactive medical support* ... Human Performance provides *proactive medical support* for a resilient and sustainable force.**
- **NEHSS should better support**
 - Physiological performance of the warfighter
 - Physical performance of the warfighter
 - Psychological performance and resilience of the warfighter
- **Human Performance scope:**
 - Specific operations
 - Warfighter's career
 - Beyond transition from active service

DCR: Implement non-materiel solutions identified in the NEHSS ICD



OIPT Progress Report and Decision Brief

HP DCR

18 Dec 2014



BLUF (Bottom Line Up Front)

•Opportunity

- Establish HP Center of Expertise to integrate HP across warfare communities
- Shape HP implementation across warfare communities
- Develop/implement proactive HP solutions for a resilient & sustainable force

•Major Risks

- Piecemeal/disparate HP application in warfare, training and acquisition
- Injuries sustained from direct combat
- Injuries sustained employing modern weapon systems in complex environments
- Injuries sustained from demanding workload (fatigue, stress, distraction, etc.)

•Way Ahead

- Establish HP Body of Knowledge, standards, protocols, and reporting processes
- Designate a lead organization to coordinate HP and HSI
- Standardize medical role in HP/HSI in acquisition process
- Review/revise HP-related training & education.
- Optimize flight surgeon/physiologist career development and progression

NEHSS Challenge: Integrate HP approaches across warfare communities



Aerospace Medical Association

www.asma.org

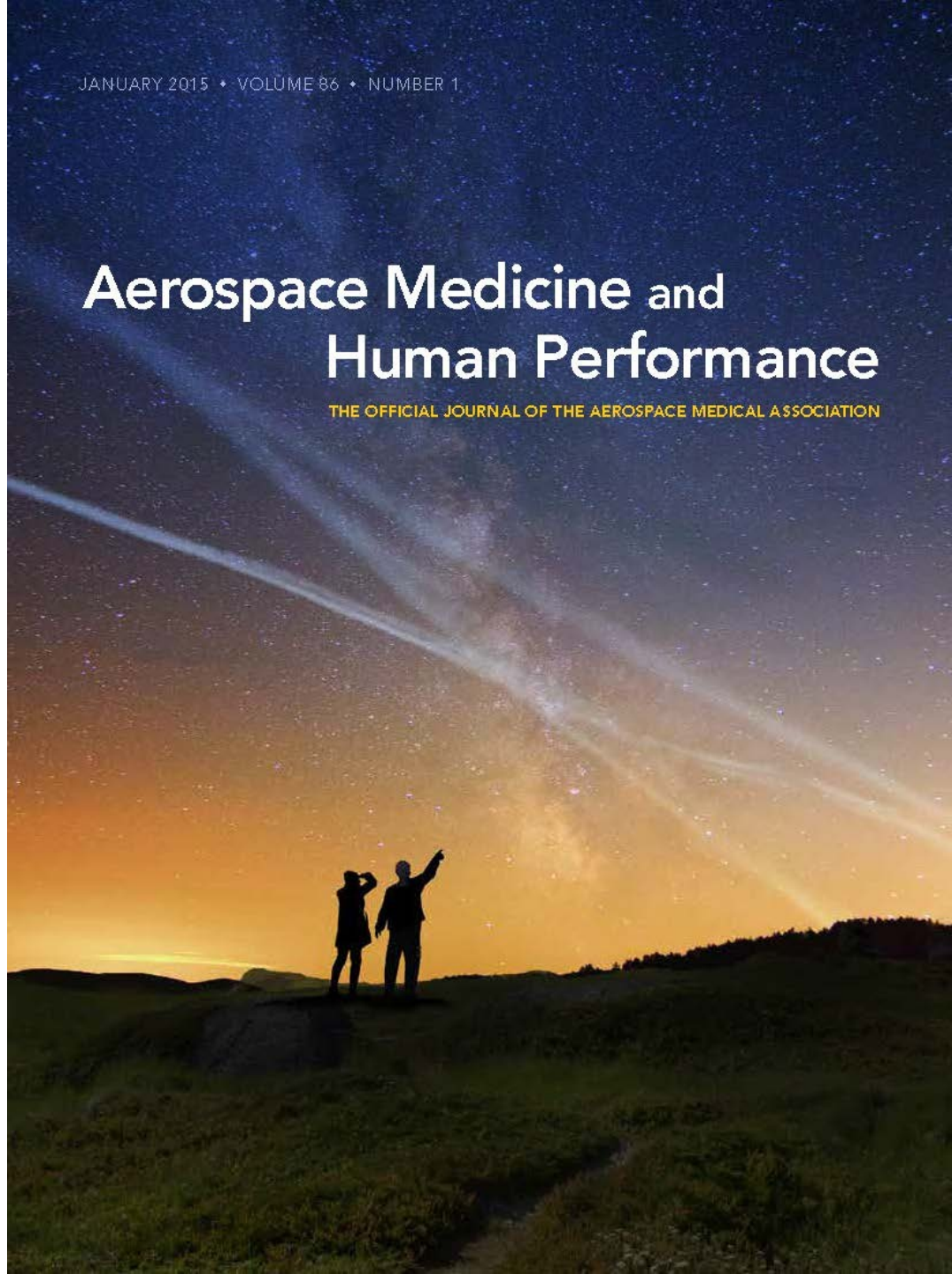
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AsMA President Elect 2015-16

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Orlando Florida 10-14 May 2015

Atlantic City New Jersey 24-28 April



BUMED
CAPT Rebecca Bates, MSC, USN



CNAF / CNAP Force Surgeon
CAPT Dave Shiveley, MC, USN

Two large, faded logos are visible in the background. On the left is the Naval Air Force logo, and on the right is the Naval Air Force Atlantic logo.

CNAL Force Surgeon CAPT Chris Lucas, MC, USN



Recognize Aerospace Medicine Leaders

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